

IN THE CLAIMS

1. – 30. (Canceled)

31. (Previously Presented) A golf ball comprising:

a core, wherein the core comprises at least one layer formed of a composition comprising at least one rubber, a metal salt of an α,β -unsaturated carboxylic acid, an initiator, and at least one thermoplastic material having a Vicat-softening temperature of at least about 38° C selected from the group consisting of a copoly(ether-ester), copoly(ether-amide), copoly(ester-amide), copoly(urethane-ether), copoly(urethane-ester), maleic anhydride grafted styrene-ethylene-butylene-styrene copolymers, and mixtures thereof; and a cover disposed about the core, wherein the cover at least one layer comprising an ionomer, balata, or urethane material.

32. (Previously Presented) The golf ball of claim 31, wherein the cover has a thickness of about 0.03 inches or greater.

33. (Previously Presented) The golf ball of claim 31, wherein the cover has a hardness of about 40 Shore D or greater.

34. (Previously Presented) The golf ball of claim 31, wherein the cover comprises an inner cover and an outer cover.

35. (Previously Presented) The golf ball of claim 34, wherein the outer cover comprises a thermoset castable reactive liquid material.

36. (Previously Presented) The golf ball of claim 34, wherein the inner cover comprises an ionomer.

37. (Previously Presented) The golf ball of claim 36, wherein the ionomer comprises at least one E/X/Y copolymer, wherein E comprises ethylene, wherein X comprises a softening comonomer, and wherein Y comprises at least one acrylic or methacrylic acid neutralized to 100 percent.

38. (Previously Presented) A golf ball comprising a core and a cover, wherein the core comprises at least one layer formed of a composition comprising a rubber, a metal salt of an α,β -unsaturated carboxylic acid, an initiator, and a thermoplastic material having a Vicat-softening temperature of at least about 38° C, wherein the thermoplastic material comprises a block polymer selected from the group consisting of copoly(ether-ester), copoly(ether-amide), copoly(ester-amide), copoly(urethane-ether), copoly(urethane-ester), maleic anhydride grafted styrene-ethylene, butylene-styrene copolymer, and mixtures thereof, and wherein the cover comprises at least one layer comprising an ionomer comprising acid moieties neutralized to 100 percent.

39. (Previously Presented) The golf ball of claim 38, wherein the thermoplastic material has a Vicat softening temperature of at least about 50°C.

40. (Previously Presented) The golf ball of claim 38, wherein the thermoplastic material has a Vicat softening temperature of at least about 60°C.

41. (Canceled)

42. (Previously Presented) The golf ball of claim 38, wherein the rubber material is selected from the group consisting of polybutadiene, polyisoprene, ethylene-propylene rubber, styrene-butadiene, styrene-propylene-diene rubber, a polymer of ethylene-propylene diene monomer, and combinations thereof.

43. (Currently Amended) A golf ball comprising a core and a cover, wherein the core comprises at least one layer formed of a composition comprising a rubber, a metal salt of an α,β -unsaturated carboxylic acid, an initiator, and a thermoplastic material having a Vicat-softening temperature of about 60°C to about 150°C, wherein the thermoplastic material comprises a block polymer selected from the group consisting of copoly(ether-ester), copoly(ether-amide), copoly(ester-amide), copoly(urethane-ether), copoly(urethane-ester), maleic anhydride grafted styrene-ethylene, butylene-styrene copolymer, and mixtures thereof, and wherein the cover comprises at least one layer comprising an ionomer comprising acid moieties neutralized to 100 percent.

44. (Canceled)

45. (Previously Presented) The golf ball of claim 43, wherein the cover comprises at least one layer comprising an ionomer, balata, or urethane material.

46. (Previously Presented) The golf ball of claim 43, wherein the cover comprises a thermoset castable reactive liquid material.

47. (Previously Presented) The golf ball of claim 43, wherein the cover comprises an inner cover layer comprising a thermoplastic material and an outer cover layer comprising a thermoset material.